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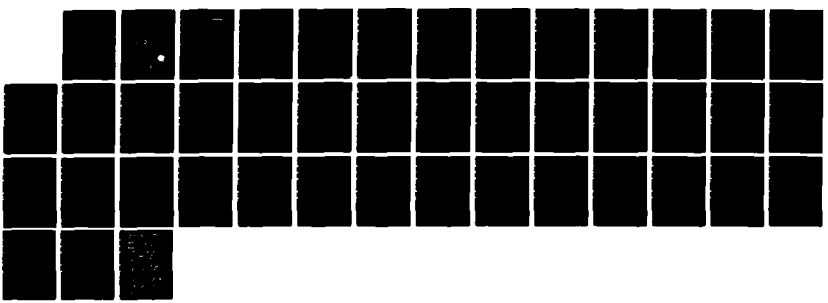

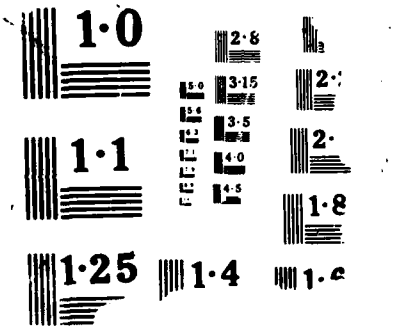
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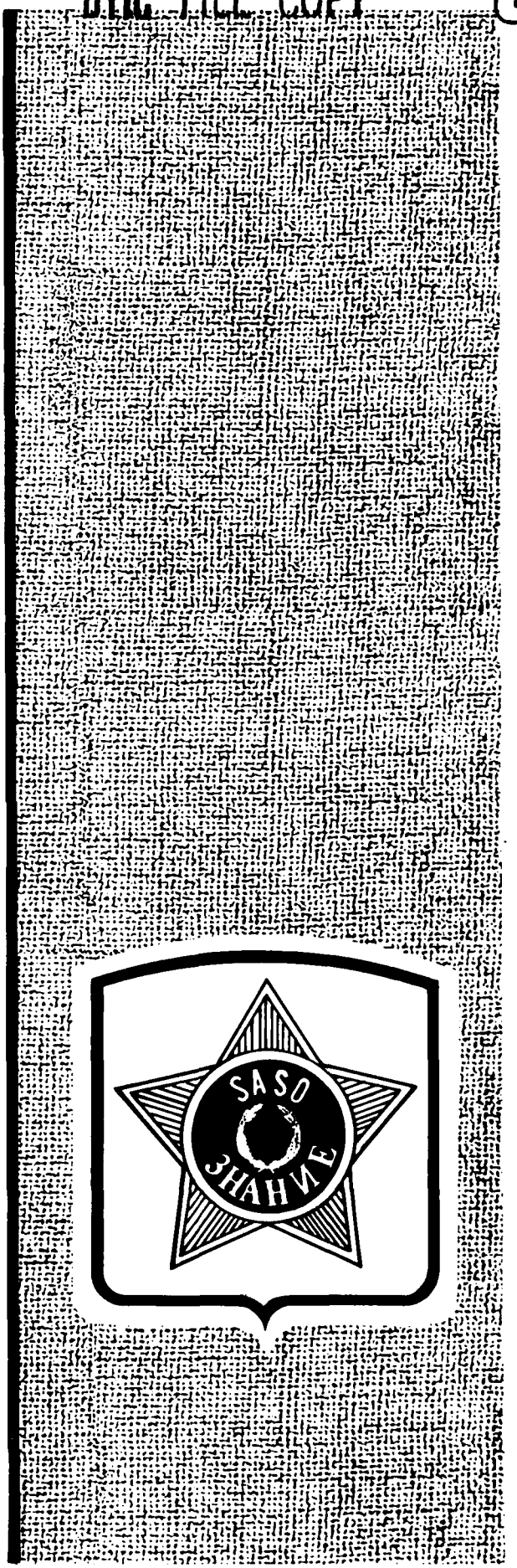
PROTRACTED WAR AND THE ROLE OF TECHNOLOGY: THE USSR



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PROTRACTED WAR AND THE ROLE OF TECHNOLOGY:

THE USSR

by

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Revised Version
15 June 1987

The views expressed here are those of the Soviet Army Studies Office. They should not necessarily be construed as validated threat doctrine.

PROTRACTED WAR AND THE ROLE OF TECHNOLOGY: THE USSR

Introduction

In asserting that "today, there is no branch of natural and technical science that is not linked to the development of the means of armed conflict," Soviet General Lieutenant Kir'ian voiced a judgement that would be difficult to challenge.(1) In the spectrum of modern Soviet military "forces and means" ranging from directed energy and nuclear weapons to spring loaded knives, and from chemical and biological weapons to the military employment of marine mammals, few areas of potential military application have remained uninvestigated. Certainly, the fielding of sophisticated new weapon systems, the development of innovative operational concepts for their employment, and a series of statements by the Soviet military leadership focusing on the impact new military technologies will have on future war, have received the most attention from Western analysts. Thus, developments like the new and evolving concepts for the conduct of nonnuclear theater-strategic operations of unprecedented scope and scale, the integrated employment of strategic land-, sea-, and air-launched nuclear strike systems, and sweeping changes in the potential of command, control, and communications means, have with some justification held center stage in U.S. threat assessment and planning considerations.(2)

This paper, however, is going to address a Soviet process that has sometimes manifested itself in far less visible

ways--that is, the USSR's application of technology to enhance its capabilities to support and wage military operations in "local wars".(3) To be sure, recent Soviet developments in this regard often have been no more subtle than the production of the new Antonov "Condor" long-range transport aircraft, or the recent establishment of Naval Infantry airborne assault battalions tasked to seize or destroy coastal targets using the most recent assault transport means.(4) Accompanying these more dramatic applications of military technology to power projection capabilities, however, has been the focused examination of technologies and techniques that--while scarcely constituting high technology in the general understanding of the term--nevertheless have the potential of increasing Soviet capabilities to support or conduct insurgency or counterinsurgency operations in the Third World. Before addressing these issues--as well as some of the problems technology has posed for the USSR in the Third World--it is useful first to say a few words about declared Soviet views on the proper application of military technology, and the mechanisms established to systematically study Third World conflicts and practically apply lessons learned.

Soviet Approaches To Assessing the Role Of Technology in Local Wars

"History," according to the prominent Soviet military theorist, Major General A. Milovidov, "knows many cases where an unskilled military leader led his technically equipped troops to defeat by the shortest path."(5) Milovidov made this judgement in an article that set out the Marxist-Leninist view of the relationship between man and military equipment and which included a critique of the "inconsistency and contradictory nature" of Western approaches to technology and war.(6) Milovidov and other Soviet military theorists have frequently charged Western military establishments--and particularly the U.S. Armed Forces--with "technological arrogance," and assigning an "absolute role" to military equipment in warfare without giving proper recognition to man's decisive place in determining the outcome of conflicts.(7) The U.S. and Western experiences in Vietnam and other local wars are cited as examples of this presumed over-reliance on technology, as are examples of how peoples may "most effectively realize the possibilities offered by their military equipment when they see that the goals of their struggle are justified, quite often attaining victory over a more powerfully equipped enemy."(8)

That is not to say that technology, and particularly military technology, has not remained of critical concern to the Soviets since the Bolshevik seizure of power in 1917. Lenin's frequently cited directive that "in modern wars, the one who prevails is the one who has the greatest equipment, organization,

discipline, and the best machines," remains a central theme echoed by the most recent Soviet assessments of the role of technology in warfare.(9) It is reflected in seven decades of Soviet effort to build a military industrial base and national economy capable of supporting a technically equipped military establish second to none. The Soviet approach to assessing the most effective application of military technology, however, stresses the need for systematized study to determine the most "harmonious" relationships between weapon systems, man, military force structure, and operational concepts.(10) Military theoretical works like that of Army General Kir'ian's Voenno-tekhnicheskii progress i vooruzhennye sili SSSR (Military-Technical Progress and the Armed Forces of the USSR), trace in detail the evolution of the Soviet Armed Forces and the historical, social, political, economic and military-technical factors that have shaped or guided their development.(11)

However successful or useful one may judge Soviet efforts to apply this kind of Marxist-Leninist approach to military development and the role of technology, it is an approach that has guided Soviet planners in the study of their own, and foreign, military affairs. It clearly has influenced the Soviet study of local wars and wars of national liberation, and provided an important input into Soviet decision-making in regard to the most effective support of Third World insurgencies, the optimum kinds of military aid that should be provided, and

the opportunities or desirability for more direct involvement by surrogate or Soviet forces.

Focused and increasingly sophisticated efforts to distill the lessons of local wars--to include the utility of a wide range of weapons systems and equipment in various operational environments--began to be reflected in the pages of Soviet military journals by the end of the 1960s. Over the next several years a number of articles dealing with operational developments from the Korean, 1956 Suez, Vietnam, and 1967 and 1973 Mid-East wars appeared in the Soviet press.(12) By 1975, with the appearance of two benchmark articles by Army General I. Shavrov, assessing local wars in all their dimensions, the intense Soviet interest in local wars was apparent even to the most casual reader of the Soviet press.(13) Shavrov's Voenno-istoricheskii zhurnal (Military Historical Journal) articles have been followed by a series of regularly featured articles on local wars in that publication dealing with issues as diverse as helicopter employment, tactical and strategic strike aviation, air defense systems, command and control capabilities, the role of surprise, the ways in which local wars are initiated, and other topics.(14) Shavrov himself edited an important volume incorporating the research of a number of Soviet specialists in the second half of the 1970s. Entitled Lokal'nye voiny: istoriia i sovremennost' (Local Wars: History and Contemporary), it

devoted considerable space to the role of various weapon systems and their effectiveness.(15)

Other Soviet military journals, magazines, and newspapers--Voennyi vestnik (Military Herald), Znamenosets (Standard Bearer), Krasnaia zvezda (Red Star), etc.--devoted increasing space to local war issues geared to their particular readerships. With the 1977 inauguration of the monthly Soviet publication Zarubezhnoe voennoe obozrenie (Foreign Military Review), the Soviets established a forum dedicated solely to addressing a broad range of foreign military force developments. A substantial portion of the articles in the journal deal with foreign power projection capabilities--strategic lift, airborne and marine forces, the organization, equipping and role of the Rapid Deployment Force/CENTCOM, and, increasingly, the capabilities, organization, equipping, and employment of U.S. special operations forces.(16) Foreign Military Review articles deal in considerable detail with those weapon systems and equipment resources that support power projection, ranging from clandestine penetration and exfiltration means, to strategic air, and sea transport resources. The concern with local war issues is reflected in the journal's editorial board, where one of the most authoritative Soviet specialists on local wars, E.I. Dolgopolov, serves. In addition to having written numerous articles on local wars and wars of national liberation, Dolgopolov is the editor of the comprehensive 1980 Voenizdat-published study of maritime

theaters of military operations, U karti mirovogo okeana (On the Map of the World Ocean). In short, the journal clearly serves as a forum that, in part, is intended for educating Soviet officers and servicemen on new developments pertinent to the conduct of local wars. Many of the articles focus on the technical equipping of those forces specifically designated, or judged suitable, for employment in distant theaters of military operations.

A research program for the continuing study of local wars, signed off by Lieutenant General Kir'ian, was set out in Military-Historical Journal in 1981.(17) Included in the 205 approved research topics for the 1981-1990 period--topics that reflected every key area of contemporary Soviet military concern from theater-strategic operations to maskirovka--were numerous research themes dealing with the conduct of local wars and the military affairs of "developing countries." The 1970s and 1980s have seen a proliferation of articles dealing with how Third World military establishments develop, ranging from assessments of armies in the institutional sense, to embryonic insurgent movements.(18) These assessments, carried out in accord with the Marxist-Leninist approach noted earlier, analyze the relationships between man, military equipment, military force structure, and, of course, the economic-political underpinnings.

An intense reinvestigation of the development of the Soviet partisan movement in World War II is serving as one explicitly identified model of Moscow's effort to determine how best to support insurgencies, to include what constitutes an appropriate level of technological support.(19) A notable article in this regard appeared in the January 1984 issue of Military-Historical Journal by Major General V. Andrianov.(20) Andrianov assessed how partisan movements in various parts of the Soviet Union differed in composition, equipment, and tactics, depending upon the geography of the region, enemy strength, local and outside materiel support available, population density, potential for operating with regular armed forces, and other issues.

He described how it was necessary for partisan units to begin with small detachment size elements, which over the course of the war grew to brigade, and then formation size. Careful attention was given initially to "supplying the partisans with weapons which would make it possible to destroy enemy personnel and equipment without engaging them in armed combat directly."(21) By the end of the war, partisan unit consolidation and appropriate improvements in their technical equipping, brought "partisan forces closer to the structure of troop formations," (22), and even allowed partisan force to cross state borders and operate "successfully in neighboring countries,

providing aid to the local antifascist forces in fighting the occupiers."(23)

Andrianov sums up the partisan experience and its contemporary relevance to local wars by observing that "from the examples of the development of the national liberation wars over recent decades, one can see that as the struggle developed and its organization improved, the partisan forces grew into regular people's liberation armies which organized themselves along army lines, although they continued to operate in the enemy rear and employ methods of partisan warfare."(24) He and other Soviet theorists have examined in some detail the equipping and resupply of partisan units, the aircraft sorties flown by military and civilian pilots, the use of airdrops and gliders for the clandestine delivery of personnel and materiel, the establishment of supply caches, medical support and evacuation techniques, the use and distribution of captured equipment, the assassination of government and military officials as well as "traitors", and many other associated issues.(25)

These on-going assessments of successful and unsuccessful foreign military participation in local wars, the study of evolving military establishments in developing countries, and pertinent historic experiences such as the partisan movement, have as the Soviets say, "enriched" both theoretically and practically that now enormous body of direct Soviet postwar

experience in supporting or waging Third World military conflicts. The course and scope of these Soviet efforts in their many manifestations are covered in a number of other chapters in this volume, and need not be addressed in detail here. As regards the role of technology, however, and identified Soviet requirements for applying and developing military-technical means which will most effectively support Soviet interests in the Third World, some summary judgments should be made. While by no means inclusive in terms of the many military developments pertinent to Soviet participation in Third World conflicts, and clearly excluding those larger issues of technology and Third World economic development, they will serve as prelude to a look at selected recent and evolving military technological developments that have important applications to Third World conflicts.

First, the requirement for strategic air- and sea-lift, so evident since the mid-1950s when major Soviet arms aid to the Third World (the Middle East) began, has grown substantially over the last three decades as Soviet global involvements and commitments have increased. Strategic mobility is, of course, essential for Soviet efforts to decisively and favorably shift the regional, theater, or battlefield correlation of forces through the rapid or incremental introduction of advisors, equipment, surrogates, or Soviet forces themselves. The series of impressive air- and/or sea-lifts to the Middle East, the movement of arms and Cuban troops to Angola and Ethiopia, and the hundreds

of Military Transport Aviation sorties flown in the opening days of the invasion of Afghanistan to introduce Soviet Airborne Troops and materiel, illustrate some of the more prominent applications of Soviet global reach.

Second, Soviet support to military conflicts and insurgencies have also pointed to the need for large, quickly available stocks of military equipment of all types and levels of modernization. That is, depending on the level of sophistication and military development of the client state, the Soviet leadership needs to be able to supply large quantities of weapons ranging from late generation aircraft and missile systems, to the most basic types of small arms. The impact of such large military assistance efforts on Soviet operational inventories--given the past scale and frequency of such Soviet undertakings--would need to be minimized as well.

Third, the requirement for providing Soviet special operations forces, as well as supported insurgent or terrorist organizations, with a wide range of specialized equipment has been reflected in Soviet operations in Afghanistan and elsewhere, in exercises carried out by diversionary-reconnaissance groups, and though the Soviet attention to Western developments in this regard. Innovative Soviet work on developing clandestine penetration means has been evidenced also.

And fourth, those Soviet forces (principally airborne and amphibious) most capable of serving in a direct power projection role have been modernized extensively over the last twenty-five years, an undertaking gaining momentum in the last decade. Emphasis has been placed on improving firepower and tactical mobility through the infusion of new equipment designed, in some cases, solely for air and amphibious assault operations. A clear Soviet concern is the need to rapidly introduce a force into a landing area for the independent accomplishment of a mission, or to secure an area for the subsequent introduction of main forces.

The sections below will address illustrative examples of recent Soviet technological innovations applicable to the support of local wars in each of the four broad areas indicated above. Some of these will constitute the most modern Soviet military-technological applications, though many areas of investigation represent the low end of the technology spectrum. In each case, however, they appear to constitute Soviet responses to a broad range of perceived requirements for the military support of Third World conflicts.

Strategic Lift

The noted Soviet transport aircraft designer, Oleg Antonov (1906-1984), while attending the 1965 Paris air show, was

questioned by a Western newsman about the military utility of his design bureau's latest creation, the An-22 heavy transport. The question was posed in response to an Antonov statement about the USSR's "peaceful aspirations" in contributing to civil aviation. Antonov's response was instructive. He asked in return if a lemonade bottle was a peaceful implement, and quickly went on to note that when danger faced the Soviet Union, such bottles filled with gasoline proved a formidable weapon.(26) In addition to indicating that the An-22 was more than a "civil aircraft," in the Western understanding of the term, there was implicit in Antonov's response the point that every Soviet resource must be regarded as having military potential and that the Soviet system is structured to focus the resources of the entire nation--from the sophisticated to the humble--on waging war. As regards Soviet civil aviation, Aeroflot constitutes the reserve of military transport aviation (VTA)--the aircraft, pilots and flight crews, airfield support equipment at home and abroad, ground crews, and the institutionalized body of experience gained from operating out of airfields around the world. Headed now by Colonel General of Aviation A. N. Volkov, a former commander of VTA, Aeroflot and its antecedents have historically been used jointly to support military activities in all of their dimensions.(27)

The An-22, of course--in both Aeroflot and VTA markings--has played a major role in Soviet military assistance

and power projection activities around the world. Two years after the Paris exhibition, the aircraft was demonstrated at Moscow's Domodedovo Airport transporting tactical nuclear-capable missile systems and high altitude air defense systems with Airborne Troop insignia; it participated in the invasion of Czechoslovakia in 1968; dropped paratroopers for the first reported time at major Soviet maneuvers in 1970; took part in the massive airlifts of military equipment to the Middle East prior to, during and after the 1973 War; played a major role in delivering materiel in the 1979 invasion of Afghanistan; and continues to be employed in wide-ranging military support activities.

The latest product of the Antonov design bureau, the An-124 heavy jet transport, will soon enter Soviet inventories and will, no doubt, rapidly establish itself as an instrument of Soviet power projection in a pattern analogous to that of the turbo-prop An-22. The CONDOR, as the An-124 is designated by NATO, has a lift capacity that is twice that of the An-22, and also surpasses that of the U.S. C-5B to which it is most comparable.(28) The An-124, while capable of serving as an assault transport aircraft in a number of operational situations, will probably find its greatest utility in the rapid introduction of heavy materiel (armor, fighter aircraft, helicopters, air defense systems, etc.) to Third World client states. It is clearly a high-value asset which, like the An-22, is best suited

for long-range power projection roles. It will substantially increase Soviet options for quickly shifting regional, theater, or battlefield force correlations in peacetime, crisis, or war.

The bulk of Soviet long-range air-lift is centered in the fleet of Il'iushin Il-76 and Antonov An-12 assault transport aircraft. The former, now totaling more than 300 jet transports, has been replacing gradually the latter, less capable, propeller driven An-12s. The net result has been a declining number of aircraft, and a rapidly rising lift capability. As may be recalled, VTA was formerly called Aviation of Airborne Troops, and the delivery of airborne/air assault forces remains the principal mission of the 600 VTA aircraft today.(29) Il-76s and An-12s have both played major roles in Soviet military assistance efforts and in the support of client states in regional conflicts. These aircraft have become familiar sights on the airfields of Third World nations, sometimes in considerable number.

The long-range strategic air transport force of the USSR will, by the start of the 1990s, consist principally of Il-76s, An-22s, a growing number of An-124s, and a declining inventory of An-12s. The force will be supplemented, as it is routinely supplemented today, by the 1,600 long- and medium-range passenger and cargo transport aircraft (to include Il-76s, An-22s, An-124s, and An-12s) and other resources of Aeroflot.

Today, the long-range air fleet--including both VTA and closely associated Aeroflot assets--is a far more capable force than the one that conducted what was considered an impressive airlift during and after the October 1973 Mid-East War, or even the force that moved Airborne units and materiel into Afghanistan in 1979. It is estimated that strategic lift for VTA alone has increased by more than 30% since the mid-1970s. Overall, the VTA and Aeroflot force will give Soviet planners expanded options and capabilities for influencing future Third World conflicts, the precursors of which we have seen over the last twenty-five years in the form of arms aid, surrogates, and Soviet assault troops.

As with military and civil aviation in the Soviet Union, the distinction between the merchant fleet and the amphibious lift of the Soviet Navy should not be drawn sharply, if at all. Official Department of Defense publications have noted that over the last two decades in particular, merchant ships have not only been designed with their military utility in mind, but have incorporated advanced communications, navigation, and electronics systems.(30) In addition to being the principal arms delivery means to Third World client states, and routinely providing logistic support to the Soviet Navy, Soviet merchant ships since the late 1970s have participated increasingly in amphibious assault exercises, delivering follow-on forces to beachheads secured by Soviet Naval Infantry units.(31) Combined

deadweight tonnage for the Soviet merchant fleet has grown about 500% in the last two decades.(32)

While the approximately 80 Soviet amphibious ships, and particularly large amphibious ships like the two IVAN ROGOV-class amphibious assault transport docks, should be certainly be assessed when looking at Soviet strategic sea-lift capabilities, the trends in merchant shipping are far more significant for Third World power projection potential. Soviet inventories now include more than 60 roll-on/roll-off (RO/RO) and rail transport vessels capable of off-loading military cargo at relatively primitive ports or what the Soviets call "unequipped shores".(33) The increasing introduction of roll- on/float-off (RO/FLO) and lighter aboard ship (LASH) resources have similar military applications (to include the transport of some of the several Soviet assault hovercraft models, as recently postulated in a popular novel).(34) Certainly, the Soviet interest in the British employment of RO/ROs to transport Harrier verticle takeoff aircraft in the 1982 Falklands conflict needs to be considered when assessing the possible future applications of Soviet merchant shipping in distant areas of conflict.(35)

The 1990s may see the widespread introduction of what Army General Kir'ian indicated in 1981 was a fundamentally new class of ship--the wing-in-ground (WIG) ship.(36) These WIGs, or ram-wing ships, resemble superficially short-winged seaplanes.

They operate above the surface of the water or land and, as Kir'ian said about this work going on "abroad," the ships are distinguished by "their high speed...and low energy consumption, and also their ability to negotiate fairly high obstacles."(37) The Soviet naval ship designer, Admiral V. Droblenkov, also highlighted the high speeds of these ships and noted in addition their long ranges and heavy load carrying capacities.(38) While Western analysts had for some years taken note of a large ram wing ship in the Caspian Seas they facetiously called the "Caspian Sea Monster," the Department of Defense publication Soviet Military Power revealed in 1986 that the Soviets had developed a large WIG craft of the "ORLAN-class".(39) While few official details on the capabilities of these ships have yet been released, one Western source has indicated that a Soviet WIG they designate the "Casp-B" is capable of carrying up to a battalion of troops, travelling 7,500 kilometers, and achieving speeds of up to 250 kilometers per hour.(40) If such estimates prove to be correct, the 1990s may indeed see an important new addition to Soviet long-range strategic lift capabilities that combines features of aviation and naval technology potentially well-suited for the support of local wars.

Materiel Support of Local Wars

In a recent newspaper article, military analyst Edward Luttwak took note of a serious problem faced by the U.S. when an

urgent need arises to rapidly ship large quantities of arms to a friend or ally during a crisis.(41) That is, because of legislative constraints introduced in the wake of Vietnam, the United States is prohibited from maintaining stocks of reserve equipment intended for distribution to foreign nations.(42) In a crisis, as Mr. Luttwak assesses, the U.S. could be faced with the prospect of drawing down on equipment in operational units to meet the resupply needs of the threatened friend or ally.

Soviet planners, faced with similar demands to rapidly and periodically provide client states with massive military equipment shipments of various levels of sophistication while simultaneously maintaining a high level of operational readiness for the USSR Armed Forces, have established a system capable of meeting these sometimes competing requirements. On the one hand, the output of Soviet defense industry has been capable of meeting a requirement for large quantities of modern weapons systems and other materiel intended for export.(43) In recent years, the level of technological sophistication of those arms provided to selected client states has increased substantially, and some of the most modern Soviet systems have appeared in Third World military inventories.(44) This materiel has been provided to favored states at the appropriate level of technological development, largely in accord with planned military assistance packages.

In crisis or war, however, when requirements exceed production output, the Soviets have the option of drawing on large stocks of military materiel not in operational inventories. That is, the Soviets have established central logistic stockpiles of weapon systems, equipment, and consumable supplies that are readily available for shipment to Third World nations on short notice. As described in a Department of Defense publication, Soviet reserve stockpiles "include tanks, armored personnel carriers, field artillery, and air defense systems as well as maintenance, engineer, signal, and other types of support equipment."(45) Many of these thousands of items of equipment are said to be older models still capable of performing effectively in combat, and are assessed as being available for theater force reconstitution or new unit creation.(46) While these reserve stockpiles no doubt serve a variety of functions, they appear to be best suited to serve as a materiel base for the rapid and sometimes massive resupply of major equipment items to Third World client states. In many cases, older models of equipment in large quantities, such as much of that dispatched to Angola and Ethiopia, are the most appropriate items required for a given recipient. In other instances, the newer items in reserve inventories could be drawn upon to support more modern military establishments. The extent to which these supply stockpiles have been used for this purpose is not known. However, their existence constitutes a Soviet capability and

potential to influence the course of local wars that is unmatched in the West.

Certainly, a Soviet concern has been to provide weapons to Third World clients that are effective, inexpensive, and available in large numbers. An indication of what may be an important Soviet innovation in this regard has surfaced recently in the Soviet military press. In the 4 March 1987 issue of Red Star, an article entitled "'Mosquito' Aviation" appeared.(47) The article reviewed the development of ultralight aircraft, and discussed the military applications--as revealed in the foreign press--that these aircraft might have. The article pointed to the many kinds of missions an ultralight aircraft might undertake, and the limited training time--twenty-five hours--required to train a pilot. It was noted that the military possibilities of ultralight aircraft were being evaluated at the U.S. Army "center for training troops of special designation" at Fort Bragg. A number of Western ultralight manufacturers were mentioned including the U.S. firm Eipper. An artist's conception of an Eipper product was pictured, with an array of weapon systems and equipment that included machineguns, rocket and grenade launchers, mines, radio and photographic equipment, night vision means, and other items. The drawing, according to Eipper Industries, had appeared in a brochure distributed some six years ago at the Paris air show.(48) Soviet publication of the drawing

and data six years later does suggest some intermediate consideration of the topic.

While this kind of article could be dismissed as one of many reporting on presumed foreign military developments, successful and unsuccessful, there are several factors that make it worthy of special note. For one thing, the author was Lieutenant General I.I. Lisov (ret), Candidate of Historical Sciences and a former Deputy Commander of Soviet Airborne Troops. Lisov has been associated with the Soviet Airborne since 1934, was instrumental in the formation of early units, and in the postwar years has been the officer principally responsible for articulating Soviet airborne history, theory, and operational concepts.(49) The Soviet military press over the last several years has run a number of features on the use of ultralight aircraft in "sports clubs" and DOSAAF. In addition to the ultralights manufactured in local clubs and organizations, however, a model is now also being produced by the Antonov design bureau, that premier producer of military transports and gliders.(50)

This kind of Soviet attention has paralleled Western interest in the potential that light aircraft may have for low intensity conflict. The numerous advantages of such aircraft (low cost, rapid, inexpensive pilot training, limited logistic requirements, portability, flexibility, easy concealment, etc.),

together with the many possible missions (forward air control, reconnaissance, LOC and area security, mine-laying, and at least limited ground attack actions) have been considered by U.S. specialists like Jerome W. Klingaman.(51) We judge that Soviet planners are at a minimum actively considering the military employment of ultralight aircraft in a variety of environments to include local war employment, and could well have undertaken a substantial development and training effort. Military ultralights may be provided in large numbers to Third World client states or, given the Airborne Troop connection, may play a role in Soviet special operations as well. In either kind of role, the employment of these systems harking back to the earliest days of aviation, may prove to be an innovation of some consequence on future battlefields.

Technology and Soviet Special Operations Forces

A careful reading of Soviet exercise critiques, training reports, the growing body of data on Soviet operations in Afghanistan, and even the achievements of Soviet military "sportsmen", give some insight into the equipping and technical support of Soviet forces tasked to undertake special operations. The spectrum of these techniques and means cannot be addressed in a single chapter, but there are several areas that deserve to be highlighted. One of these is the Soviet effort to develop

clandestine aerial penetration/delivery means, and methods for employing small parachute-delivered forces in local wars.

There has been a long-standing Soviet interest in high-altitude/low-opening (HALO) techniques, the low-altitude parachute delivery of personnel and materiel, steerable parachutes of various types, and other innovations designed to clandestinely introduce forces and equipment rapidly and undetected into hostile areas. The continued, indeed intensified, Soviet investigation of parachute delivery techniques was highlighted in 1985 by the establishment of the title "Merited Parachute Tester of the USSR."(52) The first recipient of this title, Hero of the Soviet Union Colonel Evgeni Andreev, is credited with testing more than 200 parachute systems, and carrying out some 5,000 jumps from 50 different types of aircraft. Among these jumps was a record-breaking stratospheric jump with pressure suit and oxygen from 25,458 meters with an opening at 900 meters.(53) High altitude, stabilized descent military jumps with reported openings as low as 100 meters will be more likely for special operations forces.(54)

A particular Soviet interest has been in low-altitude delivery means. As long ago as 1968, the Soviets dropped fifty parachutists from five An-2 aircraft--the likely delivery system of choice for many special operations missions.(55) All parachutists were on the ground in 23 seconds, an achievement in

which, the Soviets asserted "a new word in airborne operations was spoken."(56) This experimental employment exercise was conducted under the leadership of General I.I.Lisov, whose article on military ultralights was discussed above.(57)

A new Soviet approach has been reported, which has cut in half the altitude from which parachutists can be dropped. As set out in a 1986 military publication, a Soviet parachutist was successfully dropped from a height of 50 meters, landing 4.4 seconds from the time he left the An-2 aircraft that delivered him to the drop zone.(58) Candidate Master of Sport Vasilii Pozdniakov accomplished this drop though the use of a "forced opening parachute" (prinuditel'noe raskrytie parashiut, PRP) possibly one of several types of parachutes that are opened by an explosive charge.(59) Such "ballistic parachutes", usually fired from a mortar-like tube or metal container, are sold widely in the West as recovery systems for light aircraft. The Soviet military press has taken note recently, for example, of work done by U.S. ballistic parachute developer Jim Handbury.(60) We think that the Soviets are employing similar systems in their efforts to develop personnel and equipment delivery techniques that will allow the rapid, clandestine delivery of small units and supplies. Applications for the support of Third World insurgency and counterinsurgency operations abound.

The Soviets are making use of precision parachute drops in Afghanistan to deliver Soviet advisors/special operations personnel and Afghan commando brigade personnel into confined mountainous areas.(61) One Soviet airborne advisor reportedly set up a "sports parachute group" to train commando brigade personnel for precision jump competition with allies and in the "Olympics."(62) As early as 15 years ago, the Soviet military press noted their work with parachutes that made "it possible for a person to move two-fold faster in a horizontal direction than in a vertical direction."(63) The East German military press has also discussed Warsaw Pact "wing umbrellas with high propulsion and good control properties, which facilitate precision landings" for "commando units."(64)

Information on weapons and technical means associated with Soviet special operations units of various types indicates that considerable attention has been given to equipping these units with specialized equipment to supplement that available in general military inventories. Among those items explicitly identified in Soviet primary sources have been the silenced AKSU-74 5.45mm submachinegun, and AKM 7.62mm assault rifle; remote demolition mines/explosives that can be detonated at great distances; light weight air-droppable encrypted field radio communications means; and transponders for locating paradropped equipment (and presumably applicable for designating targets for remote strike systems as well).(65) Western sources have pointed

to equipment as varied as radios with burst transmission capabilities, spring-loaded knives capable of shooting a blade to 15 meters, and chemical and biological agents.(66) In citing the work of foreign armies, so often a reflection of on-going (or completed) Soviet research and development efforts, attention has been paid to the characteristics and capabilities of caseless ammunition, laser target designators, the most sophisticated satellite communications systems, ground navigation systems, and countless other items of potential use to special operations forces.(67)

Long-Range Power Projection Forces

Given existing air- and sea-lift capabilities, Soviet planners have expanded options for the direct employment of Soviet military forces abroad. Unquestionably, the lack of a substantial carrier-based aviation force will continue in the near term to constrain Soviet actions in some areas of the world. Nevertheless, the 7-8 Soviet airborne divisions that now constitute light armored units, a relatively small but highly capable Naval Infantry force that is well-suited to seize beachheads and ports for the introduction of follow-on forces, and the ability to lift by sea a multi-division motorized rifle or tank force, give the USSR the basic elements of an effective long-range power projection force. The growth and technical equipping of these forces have been well-documented and need not be examined

here.(68) There is a recent development, however, that points to the Soviet use of assault landing technology that is worthy of note, since it illustrates a growing capability to quickly seize and secure the kind of coastal landing areas--in European theaters or the Third World--that would facilitate the introduction of larger forces.

This development is centered in the creation of Naval Infantry airborne assault battalions in each of the four fleet areas, a force development effort that began in the early 1980s and has been reflected in exercises over the last six years. In brief, the Soviets have established parachute-qualified Naval Infantry battalions that are analogous to the air assault brigades and battalions found in Soviet fronts and armies. These Naval Infantry units are capable of landing by alternate methods--from submarine, surface ship, or from the air.(69) While an entire battalion has been landed by parachute--and there is some indication that they are being equipped with the BMD airborne combat vehicle that has so radically transformed the capabilities of Airborne Troops--their capability to land simultaneously by several methods is worthy of special note. This capability was illustrated in a battalion exercise reported in 1986, when one company was landed by parachute, one company by helicopter, and one company by assault hovercraft, to take a coastal area in support of a larger amphibious force,(70)

We believe that the Soviets are going to put increasing emphasis on the joint employment of airborne and amphibious assault forces, and expect to see the new WIG technology soon become part of the assault landing team. Unquestionably, these Soviet capabilities will be central to Soviet contingency planning for operations in continental theaters peripheral to the USSR. However, they constitute an instrument of Soviet power projection in the Third World, whose utility will increase as overall air-lift, sea-lift, and deployable strike and air defense aviation resources grow.

Finally, as regards Soviet participation in Third World conflicts, the constraints imposed on Soviet activities by the proliferation of modern weapon systems and local geography need to be noted as well. A photograph appearing in Red Star last year illustrated a Soviet problem in Afghanistan that has broader implications.(71) Pictured in the military newspaper was a Soviet supply column winding along a poorly developed road typical for the country. The column was not moving at the requisite 20-25 kilometers per hour, however, but at the speed of what the Soviets term a "sniffer" dog and a walking Soviet sapper wearing state-of-the-art body armor. This reflected a curious, but typical, mix of the modern and the old. The ubiquitous presence of military dogs in Afghanistan has been necessitated by what the Soviets say are foreign caseless mines whose detection

is so difficult that dogs and simple manual mine probes have proven to be the most effective counter-measure.

New generations of surface-to-air missiles like Stinger, may be posing analogous problems for Soviet helicopters whose employment throughout Afghanistan in a variety of mobility, reconnaissance, security, and fire support roles is extensive. Geography has made some Soviet equipment, tanks in particular, something less that the decisive weapon they are judged to be in Central Europe, with the movement of tactical and supply columns over land often an undertaking of considerable complexity. A point likely being impressed more forcefully on the Soviets in practice, is one they have certainly recognized theoretically--that the limits of technology in remote theaters of military operations require solutions that depend more on the effective battlefield performance of military personnel, than on the sophistication of weapons.

Conclusions

Soviet planners have for some years now been making a systematic effort to assess the kinds of equipment and support requirements that will be generated by their Third World foreign policy initiatives, and to determine the most effective ways to meet these requirements. While there is rarely a clear delineation between what the Soviets have done to enhance theater

military capabilities generally, and Third World power projection capabilities specifically, it is apparent that the need to influence the course of local wars has played a major role in Soviet decision-making. In our judgement, the Soviets have sought to establish a technological base that will enable them to deal with a broad range of Third World conflict variants ranging from the limited support of emerging insurgencies; to the massive and rapid introduction of modern arms, equipment, advisors, and surrogates; to the direct employment of Soviet troops. Drawing on history, the experience of local wars, military exercises, the systematized study of specific theaters of military operations to include economic, political, military, sociological, and ideological elements, and Marxist-Leninist theoretical formulations, the Soviets have attempted to develop responses geared to the requirements of specific areas and situations.

As regards technology, principal Soviet efforts to date have centered on the development of strategic mobility means; the establishment of arms and equipment stockpiles including both the most modern and older weapons, that are quickly available for shipment to Third World clients; the innovative equipping of special operations forces as well as the development of specialized penetration and insertion techniques; and the continued development of strategically mobile assault units that have the potential for intervening far from home. New applications of technology to Third World conflicts--from WIGS,

to caseless ammunition, to ultralight aircraft--may be on the horizon or already here. The Soviets, in short, appear ready to enter the 1990s with a military-technical base gearing up to support those Third World conflicts deemed critical to the "outcome of the continuing struggle between socialism and capitalism."

ENDNOTES

1. M.M. Kir'ian, ed., Voenno-tekhnicheskii progress i vooruzhennye sili SSSR (Moscow: Voenizdat, 1982), p. 6.

2. See, for example, John G. Hines and Phillip A. Petersen, "Changing the Soviet System of Control: Focus on Theatre Warfare," International Defense Review (3/1986), pp. 281-289. for a recent treatment of a number of these issues.

3. With numerous and often contradictory Western definitions of what comprises low intensity conflict, "small wars," regional conflicts, and other military actions usually associated with the Third World, the Soviet term "local war" is used in this article. Local wars, as defined in I. Shavrov, Lokal'nye voiny: istoriia i sovremennost' (Local Wars; History and Contemporary) (Moscow: Voenizdat, 1981), pp. 8-9, are "characterized by a relatively limited political objective, which determines a certain limitedness of the scale of military operations, a specific strategy and tactics, and limited use of weaponry. Local wars are initiated or provoked by imperialism with the objective of strengthening economic or strategic positions in various countries and regions, in order, in the final analysis, to undermine or push back the forces of socialism and crush the revolutionary and national liberation movement." "Military conflicts," according to Shavrov, comprise a more limited subset of local wars.

4. U.S. Department of Defense, Soviet Military Power (Washington, D.C.: U.S. Government Printing Office, 1987), p. 98-99, and Graham H. Turbiville, Jr. and Charles Pritchard, "Soviet Naval Infantry in the Airborne Assault," draft manuscript to be published in a 1987 issue of Marine Corps Gazette.

5. A. Milovidov, "Dialekticheskaia vzaimosviaz' cheloveka i voennoi tekhniki" (The Dialectical Interrelationship of Man and Military Equipment), Voenno-istoricheskii zhurnal (Military Historical Journal, hereafter cited as MHJ) (February 1979), p. 12.

6. Ibid., pp. 10-16. Milovidov also pointed out that some foreign theorists went to the opposite extreme in emphasizing man's role, a point of view that still failed to properly assess the socio-political and military-technical interaction.

7. In addition to Ibid., see A. Khor'kov and L. Ivashov, "Chelovek i tekhnika v voine" (Man and Equipment in War) MHJ (October 1978), pp. 86-90; and E. Dolgopolov, "Razoblachenie burzhuaznykh i maoistskikh fal'sifikatorov istorii lokal'nykh

voin" (Exposing Bourgeois and Maoist Falsifiers of the History of Local Wars), MHJ (June 1980), pp. 56-63.

8. Kir'ian, Military-Technical Progress, p. 9.

9. V.I. Lenin Polnoe sobranie sochineniia (Complete works), Volume 36, p. 116., and cited in Milovidov, "The Dialectical Interrelationship," p. 16.

10. Kir'ian, Military-Technical Progress, p. 329.

11. Kir'ian's important work has, unfortunately, received far less attention from Western analysts than it deserves.

12. These include, for example, A. Afanas'ev, "Helicopters Over the Jungles," Krasnaia zvezda (Red Star, hereafter cited as RS), 25 February 1970; and A. Krasnov and A. Korzuk, "Primenenie aviatsii v lokal'nykh voinakh," (Employment of Aviation in Local Wars), MHJ (August 1972), pp. 87-92.

13. I. Shavrov, "Lokal'nye voiny i ikh mesto v global'noi stategii imperializma," (Local Wars and Their Place in the Global Strategy of Imperialism), MHJ (March 1975), pp. 57-66, and (April 1975), pp. 90-97.

14. S.V. Seroshtan, "Radioelektronnaia bor'ba v lokal'nykh voinakh na Blizhnam Vostoke," (Radioelectronic Combat in Local Wars in the Near East), MHJ (March 1986), pp. 62-67; V.K. Babich, "Neposredstvennaia aviatsionaia podderzhka sukhoputnykh voisk," (Direct Aviation Support of the Ground Forces), MHJ (November 1985), pp. 53-59; V. Larionov, "Nekotorye voprosi voennogo iskusstva po opytu lokal'nykh voin," (A Few Questions of Military Art Based on the Experience of Local Wars), MHJ (April 1984), pp. 46-52; and L. Mikriukov and V. Vaitushko, "Iz opyta boevogo primeneniia vertoletov v lokal'nykh voinakh," (From the Experience of the Combat Employment of Helicopters in Local Wars), MHJ (November 1983), pp. 74-81.

15. Shavrov, Lokal'nye voiny.

16. Among the many articles published are S. Iashin, "Svodiat v edinyi kulak," (Uniting in a Single Fist), RS, 27 November 1986; N. Nikitin, "Imperialism Without a Mask: Bandits in Colored Berets), Voennoe znanie (Military Knowledge), no. 9, 1979, pp.4445; Iu. Galkin, "The Action of British Reconnaissance-Diversionary Subunits," Zarubezhnoe voennoe obozrenie (Foreign Military Review, hereafter cited as FMR) (May 1983), pp. 63-66; V. Mosalev, "Principles in the Employment of Underwater Reconnaissance and Diversionary Subunits," FMR (December 1982), pp. 73-78; and S. Semenov, "U.S. Army Special Forces," FMR (June 1986), pp. 15-22.

17. M. Kir'ian, "Prospektivnaia tematika voenno-istoricheskikh issledovanii na 1981-1990 gg.," (Prospective Military-Historical Research Themes for 1981-1990), MHJ (May 1981), pp. 44-47, and (June 1981), pp. 59-61.

18. E. Rybkin, "A Work on War and Army," Kommunist vooryzhennykh sil (Communist of the Armed Forces) no. 2 (1979) pp. 86-88.

19. Among these many articles are V.K. Kiselev, "Bor'ba partizan c podryvnoi deiatel'nost'iu fashistskikh spetssluzhb v Belorussii," (The Struggle of the Partisans with the Subversive Activity of the Fascist Special Services in Belorussia), Voprosi istorii (Questions of History) (March 1984), pp. 42-56; M. Ermakov, "Iz opyta evakuatsii i lecheniia ranenykh partizan Ukrainy," (The Experience of Evacuation and Treatment of Wounded Partisans in the Ukraine), MHJ (September 1984), pp. 76-78; N. Aziasskii, "Razvitie taktiki diversionnykh deistvii partisanskikh formirovanii v Velikoi Otechestvennoi voine," (The Development of the Tactics of Diversionary Activities in Partisan Formations in the Great Patriotic War), MHJ (November 1984), pp. 29-34.

20. V.N. Andrianov, "Organizatsionnaia struktura partizanskikh formirovanii v godi voiny," (The Organization of Partisan Formations During the War) MHJ (January 1984), pp. 38-46. Andrianov began writing historic assessments of partisan operations in their various dimensions as early as 1961 when he was a lieutenant colonel. In this remarkable 25-year effort, there is scarcely an aspect of partisan operations or support that he has not addressed. Among the many titles Andrianov has authored are "Sovetskie partizany za rubezhom," (Soviet Partisans Beyond the Border), MHJ (September 1961), pp. 17-32; "Razvedyvatel'naia deiatel'nost' partisan," (Reconnaissance Activity of Partisans) MHJ (August 1971), 20-28; "Bazirovanie i material'no-tekhnicheskoe obespechenie partisanskikh formirovanii v gody velikoi otechestvennoi voiny," (The Basing and Materiel-technical Support of Partisan Formations in the Great Patriotic War) MHJ (May 1972), pp. 80-84); and "Nekotorye voprosy upravleniia partizanskimi formirovaniiami," (Several Questions On the Control of Partisan Formations) MHJ (May 1976), pp. 39-46. Of note, Colonel Oleg Penkovskiy, The Penkovskiy Papers, translated by Peter Deriabin (New York: Avon Books, 1965), p. 182, identified a Lieutenant Colonel Victor Nikolayevich Andrianov as a GRU officer in the early 1960s. The coincidence of name and rank, together with the long-standing relationship between security services and unconventional warfare forces, suggests that the two Andrianovs may be the same person.

21. Andrianov, "Organization of Partisan Formations," p. 40.

22. Ibid., p. 46.

23. Ibid., p. 43.

24. Ibid., p. 46.

25. V. Kazakov, "Planery v nebe voiny," (Gliders in the Sky of War) MHJ (February 1983), pp. 43-46, and B. Dolgotovich, "O material'no-tekhnicheskom obespechenii partizanskikh formirovanii Belorussii," (On Material-Technical Support for the Belorussian Partisan Formations) MHJ (May 1983), pp. 30-34.
See John A. Armstrong, ed., Soviet Partisans in World War II (Madison: University of Wisconsin Press, 1964), for a most useful collection of earlier Western assessments of the Soviet partisan movement, as well as Soviet documents.

26. Andrei Sholokhov, "Aircraft Designed By Oleg Antonov," Soviet Military Review, February 1986, p. 26.

27. U.S. Department of Defense, Soviet Military Power, p. 100.

28. Ibid., pp. 98-99.

29. Ibid., p. 98. See also A. Volkov, "Piat'desiat let voenno-transportnaia aviatsii," (Fifty Years of Military Transport Aviation) MHJ (May 1981), pp. 94-96, for a concise review of VTA development, roles, and missions.

30. U.S. Department of Defense, Soviet Military Power, p. 97.

31. Charles Pritchard, "Warsaw Pact Amphibious Forces and the Turkish Straits," Foreign Policy (Turkey) XIII (September 1986), p. 153.

32. U.S. Department of Defense, Soviet Military Power (Washington, D.C.: U.S. Government Printing Office, 1986), p. 97.

33. Ibid.

34. Thomas Clancy, Red Storm Rising, (New York: G.P. Putnams Sons, 1986).

35. A. Usikov, "Nekotorye uroki i vyvodi iz anglo-argentinskogo voennogo konflikta," (A few Lessons and Conclusions from the Anglo-Argentinian Military Conflict), MHJ (April 1983), pp. 67-73.

36. Kir'ian, Military-Technical Progress, p. 292.

37. Ibid.

38. V. Droblenkov, "Skorost' khoda sudov zavtra," (Speed of Movement of Ships Tomorrow) Morskoi sbornik (Naval Collection) (April 1981), pp. 64-69.

39. U.S. Department of Defense, Soviet Military Power, (1986) pp. 92-93.

40. Pritchard, "Warsaw Pact Amphibious Forces," p. 155.

41. Edward N. Luttwak, "Ollie North Wasn't Totally Wrong," Washington Post National Weekly Edition, 23 March 1983, p. 23.

42. Ibid.

43. U.S. Department of Defense, Soviet Military Power, (1987) pp. 104-123, for an overview of Soviet defense production capabilities, and p. 134 for an estimate of major military systems sent to the Third World.

44. The role and employment of increasingly of high technology weapon systems on Third World battlefields are assessed in Dov S. Zakheim, "New Technologies and Third World Conflicts," Defense/86 (July/August 1986), pp. 7-19.

45. U.S. Department of Defense, Soviet Military Power (1986), pp. 100-101.

46. Ibid., p. 101.

47. I. Lisov, "'Moskitnaia' aviatsiia," RS, 4 March 1987.

48. Telephone conversation with Eipper Industries representative, 1 April 1987.

49. For biographic data and a review of one of Lisov's major publications, see S. Taran, "Kniga o 'krylatoi pekhote," (Book About the "Winged Infantry'), MHJ (June 1969), pp. 99-104.

50. John W.R. Taylor, ed., Janes All the World's Aircraft, 1986-87 (London: Janes, 1986), p. 610.

51. Jerome W, Klingaman, "Light Aircraft Technology for Small Wars," in David J. Dean, ed., Low-Intensity Conflict and Modern Technology (Maxwell Air Force Base, Alabama: Air University Press, 1986), pp. 123-138.

52. Boris Zyryanov, "Chute Tester," Soviet Military Review, June 1986, p. 34.

53. Ibid., pp. 34-35.

54. Hartmut Buch, "Airborne Troops Past and Present," Flieger Revue (Flight Review), April 1983, p. 175.

55. G. Titov, Platsdarm za oblakami (Bridgehead Beyond the Clouds) (Moscow: Molodaia gvardiia, 1972, p. 109.

56. Ibid.

57. Ibid., p. 108.

58. Vasilii Pozdniakov, "Vysota-50 Metrov," (The Height-50 Meters), Kryl'ia rodiny (Wings of the Motherland), November 1986, p. 12.

59. Ibid.

60. "I nam by ne grekh," (And We Are Not Harmed), Kryl'ia rodiny (Wings of the Motherland), September 1986, p. 37.
Mr. Handbury was killed testing a parachute in 1986.

61. See Graham H. Turbiville, Jr. "Soviet Airborne Troops," Soviet Armed Forces Review Annual, vol. 8, (Gulf Breeze, Florida: Academic International Press, 1985, pp. 191-192.

62. Ibid.

63. Titov, Bridgehead, p. 75.

64. Hartmut Buch, "Airborne Troops Past and Present," Flieger Revue (Flying Review), May 1983, p. 182.

65. Evgeny Mesiatsev, " V zone osobogo vnimaniia" (In a Zone of Special Caution) Smena, No. 21 (1970), pp. 16-18; A. Mazurok, "Priem material'nykh sredstv, dostavliaemykh po vozdukhu," (Receiving Materiel Means by Aerial Delivery) Tyl i snabzhenie sovetskikh vooruzhennykh sil (Rear and Supply of the Soviet Armed Forces) (April 1980), pp. 30-31; and S. Tiukin, "B razvedke" (On Reconnaissance), RS, 9 January 1985, are among the many Soviet open sources giving at least limited insight into some of the specialized equipment associated with those Soviet forces tasked to undertake special purpose missions.

66. U.S. Department of Defense, Soviet Military Power (1986), p. 72; and David C. Isby, "The Spetsnaz in Afghanistan: Soviet Special Operations forces in Action," Military Technology, (10/1985), p. 139.

67. See, for example, Kir'ian, Military-Technical Progress, pp. 271, 281-282; A. Paisov and A. Tsarev, "Printsip deistviia lazernogo dal'nomera," (Principal of the Operation of the Laser Rangefinder), Tekhnika i vooruzhenie (Technology and Armament, hereafter translated as TA) (March 1986), pp.7-9; and A. Pudenkov, Iu. Lopato, and F. Vorontsovskii, "Razvitie sredstv radiosviazi," (Development of Radio Communications Means) TA (May 1983); and S. Semenov, "U.S. Army Special Forces," Zarubezhnoe

voennoe obozrenie (Foreign Military Review) (June 1986), pp. 15-22 for several notable examples.

68. See, for example, James F. Holcomb, "Soviet Airborne Forces and the Central Region: Problems and Perceptions," manuscript to be published in a future issue of Military Review; Graham H. Turbiville, Jr., "Soviet Airborne Operations in Theater War," Foreign Policy (Turkey) (September 1986), pp. 160-183; and Pritchard, "Warsaw Pact Amphibious Forces," pp. 140-159, for a few of the more recent assessments.

69. Turbiville and Pritchard, "Soviet Naval Infantry."

70. S. Malikhov, "Kombat Morskoi pekhoty," (Naval Infantry Battalion Commander) Sovetskoe voennoe obozrenie (Soviet Military Review), p. 31.

71. RS, 20 March 1986, p. 1.

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